

## **Water Use – A Social Sciences Issue**

*Which are the most vital areas of trans-disciplinary water research? In a two-tiered process social scientists and experts from the natural sciences have identified the three key areas of institutional reforms, decision-making processes and integrated water management.*

### **Hydrologists welcome social scientists**

In 2001 the Interacademic Commission for Alpine Studies (ICAS) and the National Committee of the «International Human Dimensions Programme on Global Environmental Change» (IHDP) held a convention in Lucerne on the socio-economic aspects of water use in alpine regions.<sup>1</sup> Although the essential hydrological facts are known, there is still a serious lack of integrative knowledge about correlations between society and water use. The same conclusion was also drawn in a report by the Swiss Hydrological Society<sup>2</sup>, which repeatedly emphasises the need for hydrology to integrate social and economic issues in order to achieve trans-disciplinary co-operation.

Based on the results of the public conference in Lucerne, and in co-operation with various other specialists, a follow-up event in Bern<sup>3</sup> identified current issues in trans-disciplinary water research. A report on these two conferences will be published later this month. Focusing on the social aspects of water use, it is intended to complement the above-mentioned Swiss Hydrology Report.

### **A research challenge**

Experts have identified sustainable management of water resources as a joint (trans-disciplinary) research goal. Researchers are called upon to provide the necessary bases and analyses that will lead to integrative, local, national and international solutions to current and future problems and conflicts regarding water use. Inter- and

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<sup>1</sup> «*Das Wasser der Alpen*» («The Water from the Alps: Conflicts about its Use and Impulses for Solutions»), University of Lucerne, September 7, 2001.

<sup>2</sup> *Schweizerische Gesellschaft für Hydrologie und Limnologie* (SGHL, Swiss Hydrological and Limnological Society), *Schweizerische Hydrologische Kommission* (Chy, Swiss Hydrological Commission) (2001): *Hydrologie Schweiz: Standortbestimmung und Vorschläge zur Förderung*. (Hydrology Report).

<sup>3</sup> Follow-up event on «*Das Wasser der Alpen*» of Sept. 7, 2001, held in Bern on March 27, 2002.

trans-disciplinary processes shall serve to provide solutions to and, if possible, create (transferable) models of problems identified in individual fields.

Three vital problem areas have been identified:

(1) owing to numerous conflicting responsibilities and competing directives, Switzerland lacks a *uniform water policy*;

(2) truly *sustainable use of resources* requires institutional reforms more attuned to social and ecological aspects;

(3) increasing demands and divergent assessments of public commodities lead to *conflicts* requiring transparent decision-making and problem-solving processes. To do so, further research is required in the following fields:

- institutional reforms;
- assured continuity of public services;
- efficient division of labour between federal, cantonal and municipal governments;
- improved co-ordination of municipal water management;
- design and use of surface waters;
- transparency and efficiency of decision-making processes;
- recognition of the value of water as a public commodity and/or for societal development;
- integrative modelling of socio-economic and natural environment interrelationships in catchment areas (*river basin management*);
- development of models for the management of limited water resources to resolve global problems of water shortage.

### **Co-operation required**

Sustainable water use requires both inter- and transdisciplinary research. Various methods and theoretical concepts, e.g. institutional resource regimes, are available. This approach, however, is not yet established and recognized by the scientific community. Within the social sciences, moreover, the necessary co-operation is still lacking. For any co-operation adequate to the scope of the problems, research associations within larger projects are required. At an international level, a point of contact could be the «Joint Water Project» of the global environmental research programmes IHDP, WCRP, IGBP, DIVERSITAS; within the European Union, such points of contact could be the «Framework Directive Water», or the priority field

«Sustainable development, global change and ecosystems» of the Sixth Framework Programme. Possible Swiss projects could be the National Research Programmes and Centres of Competence in Research, or the *Stiftung Wasser Schweiz* (Swiss Water Foundation) proposed by the Swiss Hydrological Society.

For a free copy of the bilingual report (German and French), please contact Ms Kathrin Pieren, Secretary of the National IHDP Committee, [pieren@sagw.unibe.ch](mailto:pieren@sagw.unibe.ch).

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